

# CACTUS AND SUCCULENT JOURNAL

Of the Cactus And Succulent Society  
Of America

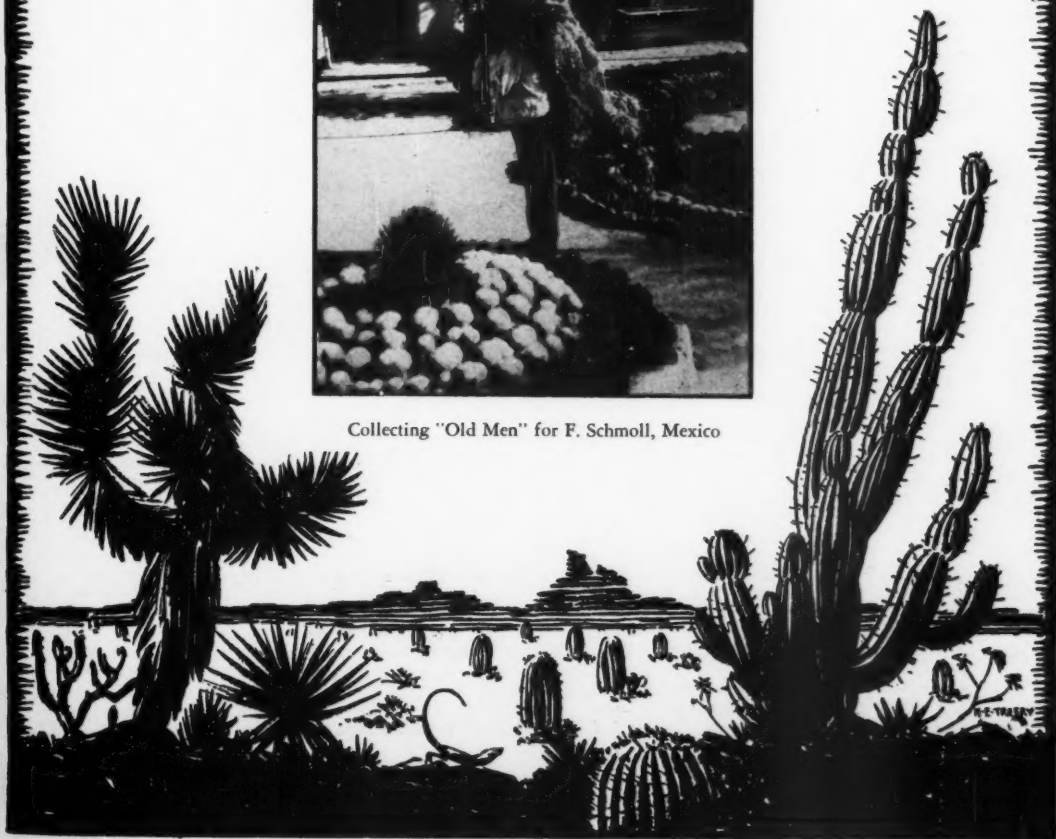
Vol. X

FEBRUARY, 1939

No. 8



Collecting "Old Men" for F. Schmoll, Mexico



## CACTUS AND SUCCULENT JOURNAL

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Vol. X	FEBRUARY, 1939	No. 8
President's Message.....	Wm. Taylor Marshall	122
Notes on Haworthias, <i>Haworthia Armstrongii</i> , <i>E. Eilyae</i> .....	J. R. Brown	123
A Botanical Kingdom in Arizona.....	Charles Gibbs Adams	126
Winter Notes.... Fred Schoenberger, John W. Skinner, Mrs. E. D. Carwardine, Prof. Arthur Blocher		128-130
From England.....	E. Shurly	131
From Florida.....	Mrs. H. C. Dorne	131
A Wisconsin Collection.....	Phil Olson	132
Washington Cactus and Succulent Society.....	Mrs. Harry Lewis, Adele Lewis	133
From Oklahoma.....	"The Candid Reporter"	133
Notes.....	Mrs. A. M. Kenyon, John Wm. Ebert, Mrs. E. A. Hall	134
Grafting Department.....	Conducted by Frank R. Mark	135
A New Jersey Collector.....	Interview of Howard O. Bullard	136
<i>Stultitia conjuncta</i> .....	R. A. Dyer	138
Cactus Growing in Holland.....	J. A. Janse	139
Favorite Plants in Hawaii.....	Mrs. Hector Moir	142

## PRESIDENT'S MESSAGE

The plants for the Society's exhibit at the Golden Gate International Exposition on Treasure Island are now being packed and within a few days will start north for their ten months stay.

Howard E. Gates will be entrusted with the important work of installation which we feel assures a showing we can point to with pride.

Our Society is invited to select a day for an assembly of our members in one of the great conference rooms of Pacific House and we are asking our affiliated groups to advise us if any of their members plan a visit to the fair and when. If enough members select the same period, a meeting will be arranged.

Plans for the entertainment of out of town visitors who may desire to visit California gardens of cacti and succulents are under way. We are prepared to suggest routes through the best cactus districts for motoring members and will arrange for garden visits in cities and towns enroute. Write to me at 327 No. Avenue 61, Los Angeles, for this information.

If you have a garden that you wish to display to visiting members please write me the days that it can be seen and the route from the nearest through highway to your place. California members, who will welcome visitors, are especially urged to list their gardens with us stating when and how they will be available.

A list of California gardens and nurseries are open to visiting members, the hours or days of the week on which visitors will be welcomed and routes to the gardens will be published in a booklet and issued to visitors together with a card of identification. This is a very important service to visiting members. Please communicate with us now so that your garden will be listed.

Our Past-President, Mr. Charles G. Adams, has started on a speaking tour and is scheduled in the following cities: Phoenix, Fort Worth, San Antonio, Houston, Mexico City, Mobile, Short Hills, Providence, Albany, Rochester, Boston, Grand Rapids, Detroit, South Bend, Davenport, Rock Island. Society members should make themselves known and no pass word will be required to say hello to "Charlie."

S. E. H.

What soil is best suited for *Euphorbia splendens*? I have 145 different species of Euphorbias and I use this mixture with success: one-third screened leaf mold, one-third screened cow manure well rotted and one-third decomposed granite if obtainable—if not good soil.

*Euphorbia fulgens* is another gem, looks like a little willow tree with red clusters of flowers. Most Euphorbias have unattractive flowers yet you get no end of models among the plants.

H. A. MUSSER, Calif.

Mr. Harry Whittle of Mesa, Arizona, reported 124 flowers of Night Blooming Cacti one evening in July.

## Editor Journal:

In answer to the question "Why is interest in cacti waning in certain sections of Texas and in Los Angeles?"—I say—The general public of all localities is educated to cacti periodically. This may occur in short or long waves of enthusiasm. These waves of enthusiasm are started by the cactus hobbyist. He will interest other people and eventually they may organize a club. The enthusiasm may gather momentum and so on to the general public who accepts it as a novelty. As this novelty wears off with the public, some of the members who are not died-in-the-wool collectors also lose interest.

HARRY BARWICK, Wis.

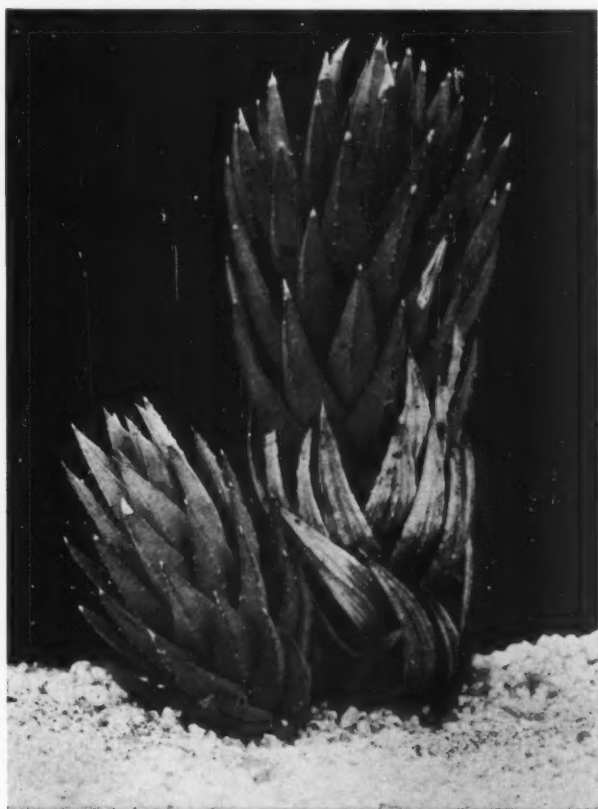
## CACTUS FOUND

(From Los Angeles Times)

COOLIDGE (Ariz.)—"Biggest organ pipe cactus known to the National Park Service has just been discovered, 100 miles north of where that species is supposed to grow.

"This unique cactus, a relative of the giant saguaro, is in the foothills north of Red Rock, in Pinal County. It has 22 arms that are 14-feet high. The biggest specimen in remote Organ Pipe National Monument, far down in the southwest corner of Arizona, has 17 arms that average 11 feet.

"Because its natural habitat is so far off the beaten paths, thousands of Arizona old-timers have never even seen an organ pipe cactus. Steps are being taken to build a trail to the one near Red Rock, which is in a fairly accessible location."



*Haworthia Armstrongii* Poelln. nat. size

## Notes on Haworthias

By J. R. BROWN

*Haworthia Armstrongii* Poelln. in *Kakteenkunde* (1937) 152, cum fig., in *Repert. Sp. Nov.* XLIII (1938) 108.

Plant proliferous from the base and ultimately forming a many stemmed cluster, stems densely spirally leaved, to 12 cm. tall (or taller), 3.5-4 cm. in diam. Leaves ovate-lanceolate, erect (somewhat spreading during the growing period), 3 cm. long, and about 10 mm. wide near the base, pale green, slightly pruinose, becoming duller and somewhat brownish-green with age, the young leaves terminating in a more or less pellucid point, which in the older leaves deteriorates into a more or less pungent white tip, face of leaves smooth, flat or slightly rounded near the tip, concave below, back of leaves

rounded and keeled, the keels and margins in the upper two-thirds with well defined, somewhat widely and irregularly spaced, whitish-green, shining tubercles, on the oldest leaves these tubercles become duller and browner. On the very oldest leaves it was noted that very occasional, short secondary raised lines occur in the lower part, on which these tubercles also appear.

Named in honor of Mr. W. E. Armstrong of Adelaide who discovered this sp.

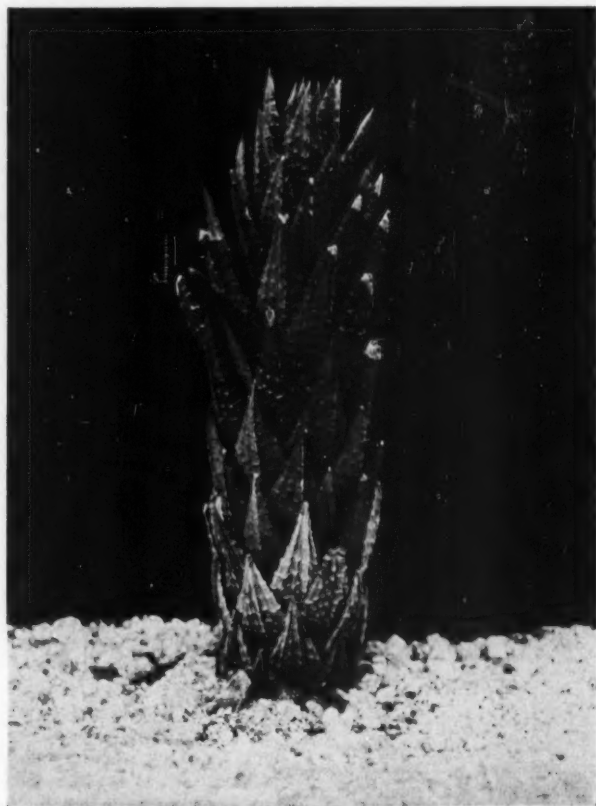
The plant shown in the illustration of this *Haworthia* was very kindly sent to me by Mr. Armstrong and shows a mature stem and a young side growth, his notes re the habitat of this sp. follow, "This *Haworthia* is found grow-

ing on the hills overlooking the Uitenhage springs, from which the town gets part of its water supply, about 6½ miles from Uitenhage on the N. E. side of the town, but more easterly than the locality of *Haw. Browniana* Poelln., on the southern slopes and near the summit of the hill and only in a small area. The soil is reddish and of good depth, the plants are growing in the open next to and between large boulders and are well protected by the grass which is rather tall. There are patches of shrubs close by and the valley below is densely shrubbed."

*Haworthia Armstrongii* Poelln. is one of an interesting series discovered in recent times, of

which *Haw. Herrei* Poelln. was the first to be described, very distinct from the older known spp. of the sect. *Coarctatae* Berger, in that they are more or less pruinose and the leaves do not remain so constantly more or less incurving, but (at least under cultivation) may be somewhat spreading and at times recurving, depending on the season and the state of growth.

*Haworthia Armstrongii* Poelln. is very close to *Haw. Herrei* var. *depauperata* Poelln. in general appearance and color, but is at once distinct from it by the back of the leaves being smooth and the tubercles on the margins and keels being distinct and separate and never confluent.



*Haworthia Eilyae* Poelln. nat. size

*Haworthia Eilyae* Poelln. in *Kakteenkunde* (1937) 152 cum fig., in *Repert. Sp. Nov.* XLIII (1938) 108.

Plant with erect, densely spirally leaved stems, to 20 cm. tall, about 3 cm. in diam., proliferous, from the base and eventually forming a

cluster. Leaves green, slightly pruinose, especially the younger leaves, erect, ovate-lanceolate, acuminate, 3-5 cm. long, 9-13 mm. wide near the base, tips incurved or recurved, with pungent pellucid points which later become brownish, face of leaves often with a slightly raised median

line, this line and often the upper part of face bearing tubercles of the same color or sometimes whitish-green, back of leaves rounded, keeled, and with from 8-12 longer and shorter lengthwise lines, the margins, keel and lines with somewhat shining tubercles of the same color or whitish-green or occasionally more distinctly white, tubercles on upper part of keel and margins forming a more or less uneven, continuous line.

Locality: Kleinpoort, between Steytlerville and Uitenhage.

Named in honor of Miss Eily E. A. Archibald.

*Haworthia Eilyae* Poelln. of the sect. *Coarctatae* Berger is closest to but distinct from *Haworthia Herrei* Poelln. by its taller stems, by the longer keels, deeper ridges and the larger and more numerous tubercles on back of leaves, the tubercles being very seldom united and often longer transversely.

The illustration of this *Haworthia* shows a stem very recently received from South Africa and about half its ultimate height, however, a cluster of this sp. has been grown for many years and it is a fine and very attractive plant. In cultivation under glass it assumes a light green color, a paler green than *Haworthia Herrei* and retains the tubercles quite distinctly.

#### WHAT IS A NOCTURNAL FLOWER?

Referring to December Journal, page 93, Mr. Marshall says "Echinopsis are distinctly night bloomers." How about *E. multiplex* and *E. erythraea*? We had 80 blossoms on a bed of *E. multiplex* and they opened in daytime. The Journal is very interesting.

ARTHUR STALEY.

While a strict definition of nocturnal flowers would include only those which open at night and close in the morning, common usage has made the use of the term nocturnal to cover all flowers which open at night regardless of the time of closing.

Similarly, the term diurnal by common usage includes all flowers opening by day, regardless of how long they may remain open.

Flowers that open after dark and fade the next morning, or those which open in the morning and fade by evening are called ephemeral flowers.

It is in this sense that I spoke of Echinopsis flowers as being nocturnal for all the species now included in this genus open at night, although several species remain open the following morning until about noon and a few species have flowers that remain open continuously for as many as three days.

As authority for my usage of the word nocturnal in the sense of opening at night, I quote Britton and Rose *The Cactaceae* Vol. III, page 3, in their generic description of Echinocereus, they say, "flowers—diurnal, but in some species not closing at night." And on page 49 of the same volume under Lobivia "flowers so far as known diurnal" although many of the Lobivia flowers remain open at night." W. T. M.



#### WHO CAN NAME THIS ONE?

Recently I noticed that one of my small spherical cacti was literally covered with "bugs," of a type hitherto unknown to me. They bear some slight resemblance to mealy bugs and to the cochineals, with which all cactus growers are familiar, but careful scrutiny will disclose that they are neither of these.

In the hope that some of your readers may identify these strange "critters," I enclose an enlarged photograph of one of the more than 400 counted on my specimen. Incidentally, the "bugs" are slightly less than  $\frac{1}{4}$  inch in length, have woolly heads, and about 20 legs on each side.

H. C. SHETRONE, Columbus, Ohio.

I found *Cacti for the Amateur* so interesting that I read it from cover to cover on the day it arrived and since then have read several chapters a second and even a third time; for instance Chapter I, with its concise, six-point definition of a cactus and the thoroughly satisfying enumeration of the protective characteristics of cacti; Chapter V—*General Culture*, and Chapter VI—*Potting*, both of which answer a real need, and Chapter X—*Propagation*, of which the part on grafting is truly fascinating; however, I wish to remark that I shall never consent to such "bluebeard" operations on my own pets, which I have tended and guarded so carefully. The *Cactus Journal* has been a source of deep interest and much pleasure to me and I look forward to another year of enjoyment from its exceedingly interesting articles and illustrations.

Anne Stommel, Wis.



# A Botanical Kingdom in Arizona

By CHARLES GIBBS ADAMS

*Past President, Cactus and Succulent Society of America*

Undoubtedly there has never been conceived a movement to enlighten the world as to the beauties, the fascinations, and the multitudinous utilities to mankind, of the Cacti, of other heat-resistant succulents, and of desert plants in general, on a scale and of a scope to even approach the project herein described.

Vigorous work has now begun on the development of the Desert Botanic Garden and Arboretum of Arizona, at the very edge of bustling Phoenix and within the vast State Playground and natural "forest" reserve of Papago Park.

Mr. Gustaf Starck first conceived the idea. The project is fostered by the Arizona Cactus and Native Flora Society, whose president is Mrs. Gertrude Devine Webster. Her fascinating desert estate has already proved her ability to garden largely in the land of little rain.

The State of Arizona has made the project possible by setting aside eight hundred generous desert acres for it. The writer of these lines is happy to have been elected as the landscape architect to design the project. The firm of Gilmore and Eckman have been appointed architects for the headquarters building.

The Federal Government is supplying the labor and generous lovers of Nature and of the desert in particular, from far and near, are donating the monies needed. Others who wish to contribute can address the Desert Botanic Garden either through Mrs. Webster, at Box 1973, Phoenix, or the writer at the Architects Building, Los Angeles.

The Cactus and Succulent Society of America has volunteered to contribute many valuable plants from members and already plants from the famous Howard Bullard Collection of Hackensack, N. J., have been donated, and a generous lot of Mrs. Webster's private collection.

The plans include a monumental gate of stone selected from the ground about; a protecting hedge of *Opuntias* along the several miles of boundaries, like those with which the padres sheltered the lands of the missions of California; a central building to embrace an assembly room, library, herbarium, study room, and quarters for the curator; a glass propagating

house, and generous lath house for sensitive specimens.

The first sixty acres or so are being devoted to the native cacti of Arizona, planted through the low native brush, in great drifts as Nature does it, to look as though the hand of man had never touched them.

As time and funds allow, the plan is to introduce, in separate sections of the eight hundred acres, the useful and beautiful plants of all the deserts of the earth.

The terrain is rendered spectacular by huge buttes and cairns of red rock, and is already largely clothed with age-old groves of gigantic Saguaro (the noblest cacti on earth), with scarlet-flowered *Ocotillos* or Desert Candles, gnarled ironwoods and *Palos Verdes* that in spring are solid bouquets of golden blossoms.

Beneath the taller growths cluster *Opuntias* of seven species, at least, and of yellow-fruited *Ferocacti* and purple-blossomed *Echinocerei*, of useful *Creosote* Bushes, silver-leaved, golden-flowered *Encelias*, and many other desert beauties. Between them Nature has strewn stones of pink and brown, green and gray and crystal white and drifts of rose quartz.

This allotment being in the heart of a vast game preserve, birds abound, particularly great numbers of mourning doves, plump strutting valley quail, and grotesque chaparral cocks.

From the slopes of this high terrain the beholder can turn to a superb view of distant mountains in any direction: Sierras whose shades of blue or purple change with every hour; over there is *Superstition Mountain*, there *Dome Mountain*, there *Four Peaks*, there below, *Paradise Valley*; over yonder lie *South Mountains*.

With such a setting and such backing, what cannot be accomplished!

## Garden Dedicated February 12

Persons prominent in the city government, in business and professional circles of Phoenix and Arizona, joined in dedicating 800 acres in the heart of Papago Park.

Mrs. Gertrude D. Webster, society president,

declared: "There are botanical gardens all over the world, but nowhere a garden concentrating on arid and semiarid plant life, and never has there been such an interest as at present in the cactus family and desert plants."

Dr. Forrest Shreve, director of the Carnegie Desert Laboratory, speaking on the subject of "Dwellers of the Desert," pointed out the effect of physical surroundings, rain, vegetation climate, character of the soil, etc., on community life.

"Our work, thinking and our lives, our culture and social activities are shaped by the influences of the type of country in which we reside," Mr. Shreve declared. Arizonians, he said, are a desert people.

"The earliest civilizations were great desert empires—the world's first steps in civilization—and on them was founded modern ways of living. The desert life brings quiet and thinking, and with the carrying of life into the moister and cooler regions we find people taking on nosier and more hasty modes of expression."

Papago Park, the speaker declared, should become a great nucleus for the cultivation of the love of nature.

Mrs. Wester, in the dedicatory address, said "Our purpose is threefold. We wish to conserve our Arizona desert flora, fast being destroyed. We wish to establish scientific plantings for students and botanists. We wish to make a compelling attraction for winter visitors."

Society members who joined the 200 people who attended the dedication were: Mr. and Mrs. Gilbert Tegelberg, Mr. and Mrs. Harry Grimes, Mr. Charles Gibbs Adams and Miss Adams,

Mr. and Mrs. Howard O. Bullard of New Jersey. Pasadena was represented by Mrs. Herbert S. Rooksby. The Cactus and Succulent Society endorses this project.



#### NEW ALOES

The Journal of South African Botany, Part IV, Vol. IV, Oct., 1938, contained the following new Aloes named by G. W. Reynolds: *Aloe dorminella* from Natal, *Aloe carowii* from South West Africa (allied to *A. variegata* and discovered by Mr. R. Carow and first named by Mr. W. Triebner).

#### NEW BOOKLET

*The Story of Cactus*: 24 pages 7x9½, 115 illustrations and drawings to illustrate cactus terms. 25c post paid from the author John Hicks Leasure, El Paso,

Texas. The interesting booklet contains general information on cacti and their culture. There are many unique illustrations and our one dismay is that they are not larger and clearer. However, Mr. Leasure has condensed many notes into small space.

The Belgian magazine "Cactus" for December contained an article "Fossils of Cacti" but the conclusions were that cacti are of such recent origin that there are no fossilized remains. Our own *Journal* should have a report on this theory.



Paper sacks for frost protection in the nursery of Dr. R. W. Poindexter, Compton, California.

## WINTER NOTES

Mr. G. A. Shaver of Napa, Calif., states, "Although the temperatures have been sustained at 24-30 for many days this winter, I have lost no *Echinopsis* from the cold. This will establish them as a hardy winter grower. I had a bloom no longer ago than the 15th of December after one of the coldest spells this winter."

### WINTERING CACTI IN MINNESOTA

Have about 300 plants in basement at a temperature of 33°. Outside temperature 15° below. No water since October. Will report results later.

Last winter and spring briefly: First week in September, plants brought into basement. Fall rains just starting. Watered each two weeks. January, repotted every last one. Continued watering when could raise temperature to 45°. March 13th, started plants outdoors in glass, substitute cold frame on four inches of sand. Temperature 70°. March 25th and week following temperature 17° to 35° with four inch snow, followed by heavy rains for several weeks.

Cold frame was five by ten feet, three feet high, bolted in sections. Plants ran from

*Chamaecereus silvestrii* to large *Opuntias*. Loss was about thirty-five plants out of four hundred.

May 30th, plants bedded in sand in partial shade. Flowers began week later and continued till fall, ending with *Acanthocereus pentagonus* in September.

FRED SCHOENBERGER, St. Paul, Minn.

### HARDINESS OF CACTI IN TEXAS

Here is some information concerning hardiness of certain cacti. Early in November of this year we had an unseasonable freeze. The night of November 4 the temperature dropped to 26 degrees and a light snow fell. My tender plants were all outside and, the next morning, were partially covered with snow and literally frozen stiff.

I left them out until noon, by which time the temperature had mounted to 45 degrees and the plants were partially thawed. Three species—*Lemaireocereus beneckei*, *Cephalocereus gounellei*, and *C. royeri* were killed. New growth on *Acanthocereus pentagonus* was killed, but the older portion of the plant was uninjured. The following species appears to have suffered no damage whatever:

*Echinopsis eyriesii*, *E. multiplex*, *Astrophytum asterias*, *A. ornatum*, *Corryocactus melanotrichus*, *Trichocereus pasacana*, *T. spachianus*, *Cereus peruvianus*, *Cereus hybrids*, *Wilcoxia poselgeri*, *Cephalocereus*



*senilis*, *C. alensis*, *C. sartorianus*, *C. palmeri*, *C. chrysacanthus*, *C. chrysostele*, *Lemaireocereus pruinosus*, *L. stellatus*, *Pachycereus marginatus*, *P. pringlei*, *P. pecten-aboriginum*, *Myrtillocactus geometrizans*, *Haageocereus acanthus*, *Nyctocereus serpentinus*, *Borziacactus strausii*, *Cleistocactus baumannii*, *Harrisia eriophora*, *Monvillea cavendishii*, *Leuchtenbergia principis*, and *Echinofossulocactus lloydii*.

JOHN W. SKINNER, Midland, Texas.

#### PARKING CACTI FOR WINTER

I wonder if you will tell me what my dream is worth in action. I was really worried last evening about my cacti as the weather suddenly took a drop to 15 or 20 below during the night and my (some 200) cacti were out in the south porch. After covering them (at 3 a. m.) I went back to bed and worried about them and finally came this idea which I imagine could be worked on many of the types for a while. I dreamt that I took them out of the boxes and pots and wrapped them in paper until March (when I open up my greenhouse for spring), putting them away in medium warm spot.

O course I realized that this could not be used on the succulents such as necklace vine, *Stapelia*s, *Epiphyllum*s, and such like.

Meanwhile my husband has christened the house and spare windows as "Skew Gardens" and I don't blame him for there certainly is a crowded look.

Next summer I am going to have a conservatory attached to the house specially for cacti and bulbs.

MRS. E. D. CARWARDINE, Sask, Canada.

EDITOR'S NOTE: We will be interested to know if anyone has tried wintering cacti in this manner. Many times imported plants, wrapped in papers, travelling in warm conditions start a sickly growth which sometimes defaces the future appearance of the plant. Perhaps cold (not freezing) weather might prevent this growth but the root system would no doubt have to be regrown following this long drying process.

#### WINTERING CACTI IN ILLINOIS

Some are of the opinion that cacti are more difficult to keep than ordinary houseplants such as ferns, begonias, geraniums. I found out from experience that the opposite is true. Geraniums have to receive sunlight every day and be placed in a window, even close or they will not blossom and grow very spindly. Many homes are overheated in the daytime and at night are allowed to cool too much, this is very hard on house plants. This treatment does not hurt cacti. Cacti do not have to be placed directly in a window, some of mine are two feet away; they receive light and some sun and they are healthy. House plants require an abnormal amount of water and prepared plant food. Each year I am reducing my number of house plants so as to have this valuable room for my cacti. Every winter we have a certain amount of foggy, cloudy weather and even in the windows, house plants suffer.

One of the first questions visitors ask as they visit my cactus gardens is, "What do you do with all these cacti in the winter?" "Do they stay out all winter?" etc. The answers to these various questions is one of the biggest problems we have to contend with here in Illinois or wherever the winters are severe. For those who have a private greenhouse the answer is simple, otherwise this is my experience and how I have finally solved my problem. My situation and work is of such a nature that I cannot as yet have a greenhouse of my own. Unless we winter our cacti carefully we have

quite a high death rate. Naturally we envy you collectors and enthusiasts in the great southwest who do not have the moving problems.

We do not have any set type of winter here which is a disadvantage as we may prepare for a warm winter and have a severe one and the opposite. I am quite a weather student keeping records, rain gauges, etc. This is the record of our variable falls, this year 1938 we have had the best fall I have ever experienced and according to statistics the best in 58 years. We did not have a killing frost until Halloween. In the year 1937 our first killing frost came September 29th. In 1936 our first killing frost arrived October 11th. In the year 1932 on September 23 the thermometer registered 18 and froze ice solid. For our winters in the year 1937 we had a very mild, open, warm winter, very little snow and only a couple of zero spells. Our worst snow storm was April 5th. In 1935 we had the worst winter I ever experienced, 30 degrees below zero, terrible winds, and 20 foot drifts of snow. Mrs. Blocher and I were snowbound away from home for almost a week.

To sum it up, from the middle of September we have to be ready anytime to cover our plants and commence moving them indoors. We have a west sun porch which is covered with glass and can hold about 50 plants. Here I move my tender specimens where they can stay safely until November or a bitter cold wind comes from the west or northwest. This porch is not heated. Our home is not furnace heated. We have a very nice attic with a good eastern window; by this window I put my smaller and most tender specimens until about December. Along the south side of our home I place more plants and on threatening nights stand long boards or lean the boards against the house and in this way my plants are assured an extra month's sunshine.

Our basement is a very poor place to keep cacti; it is not heated and is divided into a west and east room. The west room freezes slightly in zero weather. The east room has a nice south window. It is an ideal place for vegetables and bulbs as it is cool and damp with an even temperature, but a very poor place for cacti and plants. In my experiments I have found that the majority of species will rot. *Opuntia leptocaulis* keeps, but others will rot. *Sempervivums*, *Hen* and *Chickens* and some plants keep fine if not watered. I have only lost one of the so-called Century Plants here. There is not light enough for more than 20 plants. If our winters were set I could keep a large collection in our attic if the weather did not reach zero. Our home is covered with Russian steel and it greatly increases any heat from the sun. In the summer time it is an ideal place to start cactus seeds. To sum it up, from December 1st to the middle of March I have to have some other place for the bulk of my collection. Every week I spend a few hours moving my cacti around. As our home faces the north and our windows small I cannot keep very many plants there. When my collection was small especially for about the first three years it was a simple matter, but in the last two years the "Fever" has greatly increased and the collection with it.

Three years ago Mrs. Blocher and I opened a Music Studio in a neighboring town. We have two very fine large rooms on the upper story. These rooms are in between others and do not have any windows, but a large skylight in each room. While this admits light we only have sun light from May to September. This may seem peculiar but we are on the north side of the street again and the roof slopes to the north. It is heated with a steam radiator and is very warm in week

days, but on Sundays and holidays becomes quite cool as only enough fire is kept so the pipes do not freeze. The first year was an experiment, but was highly successful and the cacti came through fine. Last year we had a couple of benches of three decks with each deck four inches higher. We kept our entire collection here and our pupils really had a grand time looking over our collection and incidentally trying the thorns to see how sharp they were. All species of cacti kept fine except the Euphorbias. Aloes, Agaves kept fairly well. It was somewhat hard on the color specimens such as *Echinocereus rigidissimus*. In the daytime the firing was unusually high especially on cold days and some *Opuntias* had to be watered, other plants I did not water once all winter, including all *Coryphanthas*, *Mammillarias*, *Echinocereus*. Also, in the spring, I made the mistake of placing the plants in full sunlight and some specimens bleached quite badly including my *Echinopsis* and a *Ferocacti*. This year I will take my plants from this subdued light out to the brilliant sun by gradual stages so they do not sunscald. All of this entails much moving back and forth in our car and is not as satisfactory as a greenhouse. This would not work for other collectors unless they are in the same situation.

This year I have solved my problem very nicely. I made arrangements with a friendly green house chap, who let me have one half a bench in his greenhouse. Here the best and most of my collection reposes safely. I visit them anytime I want to and water those that need it. They receive plenty of sun and light and have a very even temperature. They are sprayed regularly the same as other plants in the greenhouse for thrips, red spider, scale, etc. My friend has a small collection and his customers enjoy my collection immensely and he quite proudly displays mine also. Visited my collection today and they are healthy, full of color and life. I have some in my home and some in our Studio. Each fall I clean all pots outside with a wire brush and paint them a pure green and this greatly enhances the beauty of the plants.

For those who have a small collection with good southern windows in their home your problems are small. For those who have a large collection with many real large plants my advice is to enlist the services of a friendly greenhouse chap.

PROF. ARTHUR BLOCHER, Amboy, Illinois.

#### ATTIC FOR CACTI

Here in Ohio, we haven't had a very cold winter thus far. Four below zero has been the coldest freeze but since most of my cacti are in an upstairs room without fire, they have been uninjured. Some are starting to grow. It is about 40 degrees when the outside is 10 degrees. My large *Opuntia* which has flowered every year was frozen before we moved it inside.

R. G. W.

#### FROM ENGLAND

Two matters mentioned in the *Journal* just to hand cause me to write you and I trust that some of my remarks may be of interest to fellow cacti enthusiasts in U. S. A.

You say that *Mammillaria* friends in England do not advocate a resting period, presumably during the winter. Who the *Mammillaria* friends here are I do not know and you do not state your authority, but I rather suspect that you obtain this point of view from Mr. Broader's article which is reviewed in the same copy of the *Journal*. As you know, I am certainly the largest collector of *Mammillarias* in this country and

I believe I rank pretty high even with U. S. A. collectors—I have 1,000 including the other families of the *Coryphanthanae*, but this includes a few duplicates, synonyms, etc. The actual number of species—including spec novae must be over 300 and there are really few that I need to complete my collection of all known published species—of this Mr. Gates is fully aware, also Dr. Craig as they are familiar with the facts. I only mention this so that you should know I am speaking with personal knowledge.

The answer to the wintering of *Mammillarias* in England is "It all depends." Hot house, forced plants always do look better to the eye than the naturally grown plant, but their stamina is sapped by their out-of-season growth, florescence, etc. On the other hand I have only imported native material and to retain the characteristics of the plant I must approach as near as possible to native condition. I am interested in *Mammillarias* solely from a scientific point of view and I realize I cannot gain anything from an artificially raised plant untrue to type. An ugly plant may often give me much interesting information. After all my efforts I know I cannot retain the natural characteristics of the plant as my conditions are not completely natural.

In England it is quite impossible to keep our plants out of doors, at least, practically the whole of the country must keep the plants under cover and only very few favored spots could cultivate even some species out of doors.

It has frequently been said that experience is the only thing that counts with cacti. Even the position of the greenhouse in a garden will affect matters. If it is getting the full sun or if in the shade. A thousand and one things must be considered and what is good for your collection is fatal to the other fellow's.

The position, seems to me, to be whether the plants naturally "hibernate." My observation confirms that they do. Soon after flowering, growth and the natural functions slow down gradually. The plant seems to be storing up energy for a new burst of energy in the new season. This lesson is confirmed in all nature, even human beings (during sleep) and the lesson of all creation surely does not find the exception is cacti. The energy consumed in propagation destroys certain of the faculties of the life of the plant or other living thing and the system has to replace what has been consumed. Why should this be done during sleep whether human sleep or hibernation? Simply because the system actually never rests—it simply slows down so as to allow the recuperating function to operate. Because the system never actually stops, but only slows down, the absolute cessation of food is fatal, not necessarily so in the absolute sense of the word "fatal," but it frequently is absolute.

If it is necessary to feed the slowed down living matter why not feed it well to enable it to recuperate quicker? Simply because recuperating and propagation calls into being entirely different faculties. The usual processes of a plant while in full life absorbs food in solution, converts it and uses it up in flowering and propagation. Recuperation means the reverse. In propagation the cell matter has to be healthy to be the transit system for the passage and conversion of the material of food from which propagation springs. In recuperation it is the cell matter that needs renewing and the passage of food is not so imperative, only sufficient to keep life alive. In the paper I have submitted to Mr. Gates (he has passed it on to Dr. Craig) I have suggested reasons for the use of the hypocotyl and if this is consulted, where the matter is dealt with more fully, an extension of reasons can be that the

matter (usually red) in the hypocotyl can be the residue which is absorbed to renew the cell material. Immediately after the propagation period the red matter of the hypocotyl is at its fullest. From the onset of the hibernation this red matter falls and at the commencement of the new propagation period its content is at its lowest so that it would seem that the hypocotyl content is used for purposes during hibernation and I suggest that this is to build up the cell material worn out during propagation.

The peculiar construction of cacti (I am particularly referring to Mammillarias as I specialize in them exclusively) lend themselves to this premise. In consequence I believe that reduction, but not absolute cessation of watering during the winter is natural. I realize I am quite unable to speak authoritatively as I only know cacti under greenhouse conditions and your experts in America, familiar with native conditions, must have the final word, but I do place these thoughts of mine before them for their consideration and application to field conditions and facts.

E. SHURLY.

#### FROM FLORIDA

To the Editor of *The Cactus Journal*:

Any letter written now should begin with Happy New Year, so here it is to all the Society.

Enclosed please find such blooming notes, etc., as I have been able to make about my very young plants. Hope to report oftener and better when there is more to report.

I notice query in October number by F. E. Bunnell, Pa., about name "Whip-poor-will." Last evening noticed in Knickerbocker nursery catalog: "*Aloe variegata*. Cape of Good Hope—Noted for its variety of common names; Parrot, *Whip-poor-will*, Pheasant's Breast, Tiger Cactus, etc."

Might this be the answer?

Was so glad to see the picture of Manda memorial. As small girl summered always in that neighborhood, and "Pitcher and Manda" was one of the highlights of my associations with that time.

In fact each *Journal* seems to bring a larger amount of satisfaction and interest. I sometimes almost gasp at the magnitude of the work you are doing. The members of the Society are a privileged lot, and they better show it.

November *Journal* best ever. If not impertinent may I applaud Dr. Poindexter's article on the Backeberg idea. We, the ignoramuses, can never learn if the scientists place us without the pale, and offer us baby talk names, reserving a language all their own for themselves.

If the remark on first column page 75 is addressed to lone scouts as well as affiliate societies, I know of five subscribers nonmembers C. S. A. without asking them, and probably as many more in my neighborhood, all ready for a nonscientific paper as described.

But, except for the short necessary Latin descriptive paragraphs, there is not an uninteresting word in the *Journal* (for this "fan") and a plan which would leave room for more of the real important and international articles is a great idea.

Now with my *mighty* experience of a half year, together with such information as my kind of mind can absorb from Houghton, VanLaren, Haselton and the *Journal*, and while still remaining true to the non-cacti, I am by way of thinking that this "neck 'o woods" is peculiarly suited to the growth of the epiphytic and climbing cactus.

My *Rhipsalis cassutha* and *Hatiora salicornioides* are tremendously at home, and two gifts of what I take to be *Epiphyllums* caused the giver to exclaim at their growth, also a small square thing has gone up a tree some five feet without attention or help in the course of a few weeks.

Therefore, I am adding these types to the others any one of which I would be glad to grow and experiment with as suggested, for the good of the records or any information that I could ultimately glean for the Society.

In short I offer to specialize (so far as limited ability and scant purse permit) in the above cactus, or any part of the *Echeveria*, *Dudleya*, *Graptopetalum*, etc., department; *Haworthia* or *Bryophyllum*, *Kalanchoe* or *Kleinia* and company. Or probably any other thing desired.

My yard (a couple hundred feet each side) slopes sharply southward to a narrow glen with a tiny stream heavily shaded from south with overhanging jungle of broad leaf evergreen and palm. Thick undergrowth of "elephant ears" and wild ginger which I am clearing in places. A windbreak of thick bamboo on NE. Two little pools with fish, papyrus, etc., collect by underground drain about 300 gals. per hour. Drains were put in to get a dry yard all the way down the slope and were slightly overdone. Therefore I have a considerable south facing slope always dry as a bone and of poor sand soil. City water spigot at hand, hen manure across the street, cow manure from milk man. No rock but can constantly pick up old concrete from walls and curbs in as large lumps as man can handle.

I am ready to be put to work in the only way I can see to assist my Society since I am not placed where I can accomplish much by contacts.

Mrs. H. C. DORNE, Box 526, Mt. Dora, Fla.

#### A WISCONSIN COLLECTION

Several years ago I was given a cactus plant and told it was called the fish-hook cactus and that the Indians out west notched the upper part of the spine, tied it on a line and caught the largest fish in the stream. The plant, the hooked spines, and the story fascinated me. Then I saw an advertisement in a flower magazine offering twenty beautiful cacti which I sent for immediately and then the cactus bug bit me and I started to collect cacti as a hobby.

Today I have a small greenhouse and several hundred plants. Most people, when they think of cacti, think of the warm regions of this and other countries whereas cacti can be grown easily anywhere if handled properly! Recently an article about my hobby as a cacti collector appeared in a Milwaukee Sunday paper and I received many inquiries from Wisconsin, Michigan, and Minnesota as to my methods of growing these plants in this vicinity and feel it might be interesting to all collectors how we do it here in Wisconsin.

The mean temperature here is 43.9 degrees F., the highest temperature is 98 degrees and the lowest 24 degrees below zero. During an average year, we have 150 clear days and 123 cloudy days and the number of days with precipitation of 0.01 inch or more is 97. We do not have much foggy weather.

My greenhouse is about 18x14 feet attached to my home with a south and east exposure. It was built at very little expense and although I use 20-inch glass it was not necessary to use double strength, but the cheapest single strength "B" grade. My benches are 26 inches high and built on all sides of the greenhouse and they are about 4 inches away from the outside walls to allow circulation. I have all my plants plunged

as I find this keeps the plants from drying out during the hot weather. In the summer months I water once each week and in the winter months only keep the soil around the pots moist and never water more than once each month. The greenhouse is kept as clean as possible to discourage pests. I found a few mealy bugs and some scale but do not have much trouble with these. A solution of nicotine sulphate is sprayed forcibly with a small dentist's syringe on the mealy bugs and lime sulphur is applied with a small paint brush for scale. The lime sulphur does not smell sweet but I also have about 40 *Stapelia* plants so am accustomed to any and all odors. I heat the greenhouse in the winter with a small two burner oil stove which is vented through the roof. It keeps it about 50 to 55 degrees F. in the winter and used \$11 worth of oil the past winter. One burner is used on the heater most of the time during the night and seldom any heat during the day except on cold days. The sun warms the greenhouse during the day and my place is also protected by my home on the north and west sides. During the summer I cover the roof with cheese cloth to protect the plants from the intense rays of the sun and ventilate from the top and both sides.

About a year and a half ago, several cacti collectors in this vicinity formed an association in Milwaukee and affiliated with the National group. Since joining this group and subscribing for the *Journal* I have increased my interest, knowledge and enjoyment of my hobby one hundred per cent. Our local club meets every other Monday and attendance is almost perfect and my association with the club members has been so pleasant that if this group was to disband I would still retain a personal friendship with ninety per cent of the group, the National group and the *Cactus and Succulent Journal*.

Our club is flourishing and I want to take this opportunity to compliment you on the last few issues of the *Journal*. I especially like Huntington Gardens articles and the questions and answers departments now running. I save every issue and refer to them many times. Keep up the good work and we will get colored pictures yet and if we do I am going to file them with reference pages numbers of Britton and Rose. I think the Glossary is fine and will have mine bound.

I took advantage of the *Journal's* offer to obtain a set of the Britton and Rose reprint and a day never passes that I do not refer to it. I can remember when sick with the "flu" how time dragged with nothing to do but lie in bed. Sometimes, I almost wish that I were sick so that I could spend hours with B. & R. as a companion. Have made friends with several commercial growers and think as a class they are the best sort of people I have ever dealt with; always willing to co-operate and to offer advice which I appreciate.

No one can explain the thrill I had when I opened the May *Journal* and saw the article about *Monadenium lugardae*, a plant I had and did not know much about. I have a nice succulent collection and have several nice specimens of *Haworthias*, *Lithops*, etc. We have three native *Opuntias* here in Wisconsin but, as they are hardy I do not grow them in the greenhouse. My loss of plants is practically nil. The succulents are watered twice a week in the summer and twice a month in the winter.

I am sure that as time goes on, my collection will grow larger and I hope, through our club, that we can interest others in this fascinating pastime.

PHIL OLSON, Vice-President,  
Milwaukee Cactus and Succulent Society.

#### EDITOR'S NOTE

We have received a most helpful report of the cacti that flower in Wisconsin in the collection of Clarence Schmutzler. These notes are most valuable and are a big help in the compilation of flowering data. Mr. Schmutzler reported some hardy *Echeverias* that will be a surprise to our specialist—Mr. Walther.

#### WASHINGTON CACTUS AND SUCCULENT SOCIETY

In planning our programs we try to pick subjects that the different members are interested in, and if anyone has a specialty, of course that naturally becomes their subject. I believe at our next meeting Mrs. Cotton is going to put on a very interesting program. Her subject "Ten Favorite Succulents Other Than Cacti" will be illustrated with several species of each genera, accurately named and pronounced.

Perhaps you would be interested in knowing how we gather material for these lessons. As our libraries furnish so little on succulents, Mrs. Thorp and myself go through our own books and magazines, making three copies of subjects that might prove beneficial. This is put in three loose leaf note books and arranged under the different family names. In one book, which is given to the member preparing the lesson, we paste in illustrations of the different genera described, using the pictures cut from old catalogs. The other two books are loaned out to members desiring them. We also keep another book containing our by-laws, list of our officers and membership with phone numbers and addresses, and a copy of our lessons. This is for the use of new members, who may want to review our work. Mimeographed copies of the lessons are given to each member.

We found that we were growing so fast that we had to limit our membership to forty, which we now have. Members living out of town will become associate members so that at the end of this year (May) we can take in a few more regular members. We are seriously considering the organization of another group, perhaps in the south end of the city.

Meetings are held in the evenings in different members homes and the routine we have fallen into is on arrival to inspect the hosts collection of plants, then the meeting is called to order, and after a short business session, we have the lesson and discussion and adjourn. No refreshments are served and so far we have had no social functions. So far we have done nothing to raise money outside of our dues. We have preferred to wait awhile to see how permanent we are to become before we invest very much in literature.

At sometime in the future, we hope to establish a collection of succulents here in Seattle. We have discussed both the city park conservatory and the arboretum. Many of our members would prefer the arboretum because they feel that they would probably put someone in charge who could help us in the study and propagation. In a place of this kind it wouldn't be just a jumble of plants but a place where they would be correctly named and cared for. Then too, the arboretum has had such wide publicity that it might be easier to get donations of plants. However, the arboretum has not as yet provided greenhouses for tender plants, so for the present we have let the matter drop.

Some cacti noted in bud in January: *Mammillaria fragilis*, *M. cephalophora*, *M. leona*, *M. schnieideana*.

Mrs. Cotton became so interested in *Haworthias* in working up a paper on "Ten Favorite Succulents,



Other Than Cacti" that she has decided to specialize on this genera of Liliaceae.

Mr. Ewing recently built an addition for his plants that might be of interest to people living in very cold regions. Using 2x4's for framing, he sealed it inside and out with cedar shiplap, and filled the space between with sawdust. Roof was also made in the same manner except that the outside was shingled. Windows are placed along the south and west side over the plant bench. This requires very little heat and retains the heat for a long period.

We who have read *Cacti for the Amateur* consider it an excellent book for beginners. I only wish that I could have had something as good when I first started my collection.

The programs of the Washington Cactus and Succulent Society are getting better and better all the time. At our last meeting, Phyllis Oakley gave an excellent paper on raising seedlings and demonstrated it with some of her own seedlings. Another very interesting talk was given by Mrs. R. H. Gidgway, who discussed desert life in Arizona and brought along a number of Saguaro scars that she collected while making a horseback trip over the old Apache Trail. The larger part of this collection of "scars" is now on display at one of the radio stations in Chicago. She described how the desert animals and birds make holes in the Saguaro for nests and protection from other animals and when this cactus falls and decays these scars remain, forming many weird and unusual shapes.

I haven't as yet had any serious trouble with the plants that I cut the roots from (to get rid of mealy bugs). Some I had to cut a second time, but so far I have had no losses. A few have rooted, especially those kept in a warm room and unpotted. *Harrisia martinii* matured its fruit, starting about Thanksgiving despite the fact the plant is now only a cutting. *Mammillaria kewensis* still remains my best bloomer. It is now eight inches tall and is seldom without flowers or buds.

Those of us who have south windows can give our plants more sunshine at this time of the year than we can in summer when the sun is higher in the sky, and with the added warmth of our homes in winter, nearly everyone reports their plants making a very definite growth during the last month.

MRS. HARRY LEWIS, Seattle.

I had intended to write you some of our experiences since building our greenhouse, but our local society is sending a copy of Mr. Lewis' paper on greenhouse construction delivered last month at our meeting and it speaks for itself.

Even though our greenhouse was not complete until July I had flowers appear on old plants I had had for years without a sign of a flower, namely, *Mammillarias: decipiens, campotricha, moelleriana, boscasana, erythroperma, microbelia*, and many others. I had one exquisite flower ten inches in diameter on *Selenicereus grandiflora*, this in spite of the fact it was tied up against a fence in all kinds of weather during May and June.

Naturally I am looking forward to even better things this year. I see already many of the *Mammillarias* are budded and that there are five buds on a tiny *Gymnocalycium mihanovichii*.

I am interested in acquiring all of the pictures of cacti that I possibly can as I have a very nice scrap book started. I wonder if you can suggest any place I

might be able to buy some?—So many of the catalogues are so nice it seems a shame to cut them up.

I can truthfully say my cactus hobby has saved me many bad moments since I'm one of those who can't seem to keep from bringing home all the office problems to stew over through the night. Now when I've had a bad day I take my fury out on the plants with sometimes good and sometimes pathetic results to them, but always with a calming effect on me.

Spring is just around the corner (I hope) and I'm getting the bug to buy more plants! Jan. 1, 1939.

ADELE LEWIS, Seattle, Wash.

#### "FROM OKLAHOMA"

On Dec. 15th we held our annual Christmas Party at the home of Mr. and Mrs. R. A. Chubb, and did we have fun? An exchange of plants from a lovely Christmas tree was only one form of entertainment. Games were played throughout the evening in front of the cozy wood-burning fireplace in their home. Prizes consisting of the following plants, *Mammillaria geminispina*, *Oreocereus trollii*, *Euphorbia pferdorfi*, and *E. pseudocactus* were awarded the winners. A large assortment of tiny cacti were used as favors, also.

Mr. Chubb, our President, was presented a lovely *Astrophytum ornatum* var. *mirbellii*, as a token of appreciation from the Society. One of our Past Presidents, Mrs. Jesse Vandenberg, made the presentation, with very fitting words commending Mr. Chubb for his splendid work as President during the past year. He also received a lovely tinted picture of Mrs. Kelk's Desert Garden and a new oil painting—a desert scene of which he and Mrs. Chubb are very proud. Our Christmas party is our one social meeting of the year, devoted entirely to fun and we always look forward to the happy time.

Our new President, Mrs. Jas. H. Hyde, is starting off in a big way and we feel confident of a good year under her leadership. We reversed our usual order when we elected our new Secretary, C. L. Wiese—all of our former secretaries being of the feminine gender.

Speaking of H. O. Bullard—while recently in Oklahoma on a field trip, he threatened to put somebody in the hospital if we did not find the cacti we had told him of, growing along the roadside easily seen from the car. The road had been changed a bit, so put us off our bearings for a short while, but we did find plenty plants growing along the river in the mud, so, of course, H. O. was happy, only then we had a lively discussion as to what the plant was, some contending it was *Echinocereus perbellus* and others that it was *E. purpureus*. No final decision was reached except we all agreed it was a cactus.

Another field trip to the Wichita mountains in Southwestern Oklahoma was interrupted by a light snow storm and cold rain, though some of the members went ahead and reported a grand time, rain and all. Anyhow, H. O. has this trip coming and we all hope to make it in the not too far future.

We also feel honored by the brief visit of Mrs. Gertrude D. Webster, another cactus enthusiast. Even though only a few of our members had the pleasure of meeting Mrs. Webster during her short stay, we all join in wishing her much success in establishing the new Botanical Garden near Phoenix, Arizona.

And that reminds me, Mrs. Harry T. Johnson, the lucky lady—is spending the winter at Wintersburg, Arizona.

A recent inquiry from California asks if our Oklahoma Society members just have collections of Native Oklahoma plants. Far from it, we have only about three dozen species of cacti native to our state and they



are mostly opuntias. Many of our members have collections numbering over one hundred species, several have over two hundred and our real collectors never stop adding new plants, their collections containing as many as four or five hundred species, Jay E. Gilkey's, for instance, as well as others. Of course we have our hardy gardens containing native cacti, as well as many plants from nearby or northern states and we find several will stand our winters out-of-doors. Few plants from the extreme south or west, however, will survive our winters here. Frequent changes of temperature and excessive moisture prove too much for most of them. Our collections are for the most part wintered indoors and the greatest problem is trying to keep them in their living quarters, the heat tends to dry them out until watering is necessary. If growth starts it usually lacks proper light and is often pale and weakly. This often spoils a nicely shaped plant, especially the globular types and this proves one of our biggest problems in winter care. Where the plants can be shut off from heat, one need not water very often all winter and a truly dormant state can be maintained, but very few are equipped or have the room to do this. Of course this is the one thing which limits collections more than any thing else.

Our new year-books are ready and while some of our lessons are rather complicated, we also tried to remember the new members and selected material suitable for the beginner in many instances. We think they will appreciate this fact and soon be ready for the more advanced studies. We have also devoted several lessons to questions and answers which should really cover the subject for all. I'll wager we will get some questions which will make us all do research work. We may be calling for assistance after the first session.

#### "THE CANDID REPORTER"

#### VARNISHING CLAY POTS

I am not sure I can claim to have a "collection" for I have only thirty-three kinds of true cacti. For several years I had half a dozen of the more common kinds but did not know how to care for them so as to secure blooms. A year ago I bought about twenty-five unnamed seedlings—each different. It has been most interesting to watch them grow but I shall not be satisfied until I know the name of each. I knew little about their care but have been fortunate in freedom from insects. Twice I found mealy bugs and sprayed with "Evergreen" pyrethrum. I soaked the soil with it.

When it was time to put them out last spring, we prepared a raised bed under a tree. In it I put all the cacti and the succulents. They grew remarkably well. About twenty-five of the smaller cacti are in a patented "Success" window box\* in a large double south window. The box sets over the radiator board—with blocks to raise it two inches. I have about five inches

of coarse sand in the bottom of the box and it has a long opening in the bottom through which to water it.

So far, none of my seedlings have bloomed. As soon as I have had time to study your book I wish to take advantage of some of those special offers and so secure cacti which will give winter flowers.

I note you suggest sinking the cacti pots in the garden for the summer. I think you might like to hear my experiences with sinking pots. I found that after a summer in the ground the clay pots were too unsightly to use in the window garden. Glazed pots are rather expensive when one needs so many. Two years ago I hit on a fine plan. The outside of each pot is given a coat of orange shellac. When dry, we give one or two coats of varnish stain—in either walnut or mahogany. The result is an attractive pot which looks well in any room. Best of all, the pots still look like new when taken up from a summer plunged in the ground! I treat both inside and outside of the clay saucers with the shellac and varnish stain and it waterproofs them so they may be placed on any varnished surface.

MRS. A. M. KENYON, Iowa.

#### FROM MARYLAND

The history of my experience in growing cacti is, I think, somewhat unusual. Prior to five years ago, I was growing ordinary pot plants in a modest way, about which time a friend presented me with some cactus seed; I also bought a few, and when these started to come along, I became enthusiastic, and immediately began to discontinue the pot plants, replacing them with cacti and succulents, as fast as I could grow them. This is more a hobby with me than a strictly commercial business, as I am able to devote only one-half of my time to it, the other half being spent in ice cream manufacturing. I have about 1000 seedlings, mostly South American, all grown by myself and I want to dispose of some of them, in order to make room for more. So far as I know, mine is the only business of its kind within a radius of 50 miles, and I have people call at my green-house from Baltimore and Washington, practically the only advertising being by word of mouth, for I do none of this except a line occasionally in the local paper. At that, Frederick people are taking to these plants a little more each year, and in the course of a year, I dispose of quite a fair quantity.

JOHN WM. EBERT, Frederick, Md.

#### OREGON CITY, OREGON

I have ten cactus plants; I believe all are different but names of them I'm not familiar with outside of Christmas and Thanksgiving Cactus; a flat long leafed one, a Rat-tail, and Pheasant's Breast.

All are young plants except the Christmas and the long flat leafed one which bloomed last summer. The latter had twenty-seven lovely red blossoms (*Epiphyllum ackermanii*). Opuntias grow wild in western Nebraska where I came from four years ago; there they are just a pest, even sheep don't care much for them.

I don't have much money to invest, so will have to depend on seeds for my start. Have seven plants up from a seed packet—one seemed to get so tired it just quit; others O.K.

MRS. E. A. HALL.

I look forward eagerly to each new issue of the *Journal* and heartily endorse your suggestion of a publication for collectors like myself.

Frances Leber, N. J.

\*The "Success" Window Boxes are substantially constructed of galvanized sheet steel, lock seamed and soldered watertight. A water pocket extends the full length of boxes, from which tubes lead into the box itself. This pocket with the tubes serve the following purposes, i.e.: Provides for watering the roots from below, allowing them to take up moisture as required; provides air circulation and ventilation, keeping the soil sweet and healthy; provides a perfect drainage should the plants be excessively watered by heavy rains or other causes. In fact, it serves as an accurate gauge as to the condition of the soil at all times.

## GRAFTING

*A Department conducted by Frank R. Mark, 825 Elyria Drive, Los Angeles. Mail him your problems.*

In using *Cereus* hybrids as grafting stock for cleft grafts, my experience has been as follows: About two weeks after grafting, and after the graft has "taken," a small dark area appears around the spine used to hold the scion in place. If no action is taken this rot spreads rapidly but affects only the stock—never the scion. Prompt excision of the affected portion will save the graft but spoils the appearance of the plant. This is pretty obviously caused by rot-producing bacteria or fungi borne on the spine. Why should not a sterilized needle be better for this purpose? I note in your book you advise against this. JOHN W. SKINNER, Midland, Texas.

*Answer:* Needles and pins are not advisable in fastening scions to stock as they usually cause rot. Toothpicks are used by some propagators, but they leave a hole when removed, disfiguring the plant and they also sometimes cause rot. NEW, CLEAN spines are best for this purpose. They grow into the plant and you can later clip them off flush with the surface. Some of the *Opuntias* produce a spine with a protective sheath; when this is removed the spine is absolutely clean, and as a further precaution against causing rot, they could be dipped in alcohol and then dried before using. FRANK R. MARK.

## SUITABLE STOCK FOR GRAFTING

By THOMAS SHARP

From Sept. *Cactus Journal* of Great Britain

The following list of grafted cacti, with one exception all of my own grafting, was prompted by lack of success on "own roots" of the species named. The one exception is *Cereus peruvianus* of which I have a plant growing on its own roots. The cause of so many non-successes I attribute to absence, or rather loss, of about half the normal sunshine due to the aspect of my houses.

*Pilocereus palmeri*, grafted 8th June, 1933, on *Pilocereus strictus fonachianus*; scion a seedling 1 inch long, 1/8th inch thick. Union was speedy; the first growth 1 inch long, second 2 1/2 inches long, and the third 6 inches long, almost destitute of wool. No growth has been made since, but there is some evidence of activity now.

*Cereus peruvianus monstrosus*, grafted in 1936 on *Cereus validus*; result, 2 inches of growth.

*Opuntia cylindrica* grafted about five years ago on *Opuntia vulgaris*; result, three stems;

after three years the stock rotted; the new growths were dried and stood on a mixture of broken pot and sand where they quickly rooted, two of the stems being now 6 feet long, and the third, 18 inches.

*Opuntia senilis* grafted on *O. vulgaris* made huge growth absolutely bare of wool, but fairly furnished with yellow spines. This plant was broken up, some pieces given away, others destroyed, but one medium growth was rooted.

*Opuntia clavaroides* grafted on *O. robusta* in 1937 has made no growth.

*Opuntia subulata* grafted on *O. ficus-indica* in 1937; prompt union and 7 inches growth; it was just starting again last July, 1938.

*Cereus formosus monstrosus* grafted on *C. peruvianus* in June 1920; it has made 26 inches growth with signs of slowing up.

*Opuntia acracantha* on *O. cantabrigiensis* in 1931; growth good with increased length of spines on growths of the last three years.

*Cereus donkelaerii* grafted on *C. stenogonus* in 1936 has made no growth.

*Opuntia microdasys* grafted on *O. robusta* in 1936 made no growth in 1936 but three in 1937.

*Opuntia microdasys* grafted on *O. ficus-indica* in 1936 made satisfactory growth.

*Opuntia microdasys albispinus* on *O. ficus-indica* in 1936 made satisfactory growth and in 1937 and 1938 also.

*Cereus formosus monstrosus* grafted on *C. macrogonus* in 1935 made good growth.

*Opuntia basilaris* (stunted growth mentioned above) on *Opuntia* sp. in 1938; there is no result so far.

*Echinopsis aurea* grafted on *C. stenogonus* in 1938 with no result.

*Cereus donkelaerii* on *C. peruvianus* in 1938 with no result.

The following are trade grafted plants:—

*Aztekium* on *Cereus* sp., very healthy.

*Pilocereus euphorbioides* on *Cereus* sp., healthy.

*Pilocereus guntheri* on *Cereus* sp., healthy.

*Mammillaria hahniana cristate* on *Cereus* sp., healthy.

*Echinocactus monvillei* on *Cereus* sp., said to have been grafted by the late Mr. Justus Corde-roy fifty or more years ago; for its age it is a pygmy.

*Opuntia papyracantha* on *Opuntia* sp., 1938 growth ordinary.

*Opuntia papyracantha* on *Opuntia robusta* in 1933, first two growths very large, subsequent growths normal size, very healthy.

The grafting experiences of Mr. Sharp are very interesting, no doubt at least part of his trouble, on rooted plants as well as grafts, was due to the lack of sunshine and possibly heat.

Nearly all of the *Opuntia* group root very readily during the summer months even in the shade, but where inter-grafting in this genera becomes necessary I would strongly recommend the common Burbank spineless, (which is the spineless variety of *Opuntia megacantha*), as a stock.

With one exception, no mention was made of the time of the year that the grafts were made and nothing was said of the growing condition of the stock or scions. Grafting should only be attempted during the hot summer months and both the stock and scion should be in a growing condition, actually putting on a cycle of growth.

Since the art of grafting has now become a necessity for the cactus propagator, the above notes will be very interesting. Beginners in grafting are usually at a loss as to the most suitable stock to use for grafting a certain species. A most interesting series of notes could be assembled stating which stocks are most successful for definite species. We will welcome these notes on your experiences.

F. R. M.

#### ADDITION TO ECHINOPSIS LIST

Cactus Journal Vol. X, No. 6, pg. 93

Mr. A. C. Tracy of N. Y. states that *Echinopsis fiebrigii* should be included in the recently published list of true species. We appreciate such interest that helps us check the listings of plants.

#### NEW CATALOGUES AND LISTS

El Paso Cactus Co., Box 3038 El Paso, Texas. A sheet of novelties printed from the original wood cuts made by A. Blanc. The list is for dealers and contains "Some Wholesale Offerings."

Robert Blossfeld, Potsdam, Germany. 36 page illustrated catalog of cactus and succulent seeds. Also a "Wholesale Offer for Cactus Plants" which are intended to be collected in the Argentinians.

R. W. Poindexter Nursery, 1000 N. Temple St., Compton, Calif. A 13-page mimeo list of "Special Collectors' List of Rare Cacti and Succulents." This interesting list is explained as follows, "This catalog lists only rare or unusual plants—plants which may be termed 'collectors' items.' Our business is really a wholesale one. However, being ourselves interested in assembling as complete a collection as possible, we have on hand a number of items which, because of their scarcity, cannot satisfactorily be distributed through wholesale channels. We shall therefore supply only these particular items directly to the ultimate buyer. The following list is limited to items of this nature, none of which are carried on our wholesale lists. For the convenience of those who desire plants not included here, we inclose a list of the items in our wholesale stock and also the names of approved dealers from whom these can be obtained. For the latter class of plants we shall appreciate your selecting a retail dealer conveniently located and ordering from him, and we shall particularly appreciate your mentioning us when doing so. In case you are not able to obtain from this dealer the plants which you desire, we should like you to write to us directly."

The most interesting list is composed of a specialized list of Phyllocacti. This listing of the much desired Phyllocacti, Epiphyllums or Orchid Cacti will be welcomed by those who wish a collection of these beautiful flowering cacti.

Wholesalers may also secure lists of Cacti and Succulents as well as wholesale lists of Phyllocacti.

(Wholesalers must make requests on their business letterhead)

#### A New Jersey Collector

One of the best known members of the Society is Howard O. Bullard of Hackensack, N. J., who contacts many collectors in remote parts of the country. During the winter months while his collection is sleeping in his huge glass house, he drives through the Southwest to California and en route contacts nearly every known collector and dealer. After visiting many of the affiliated societies "H. O." has reached many interesting conclusions.

We are all interested in what fellow members think about us and the Society in general. Some times we regret knowing the facts, but in every case a better understanding results. Distance is usually detrimental to a mutual understanding, but commercial men, once you know them, are found to be very good fellows.

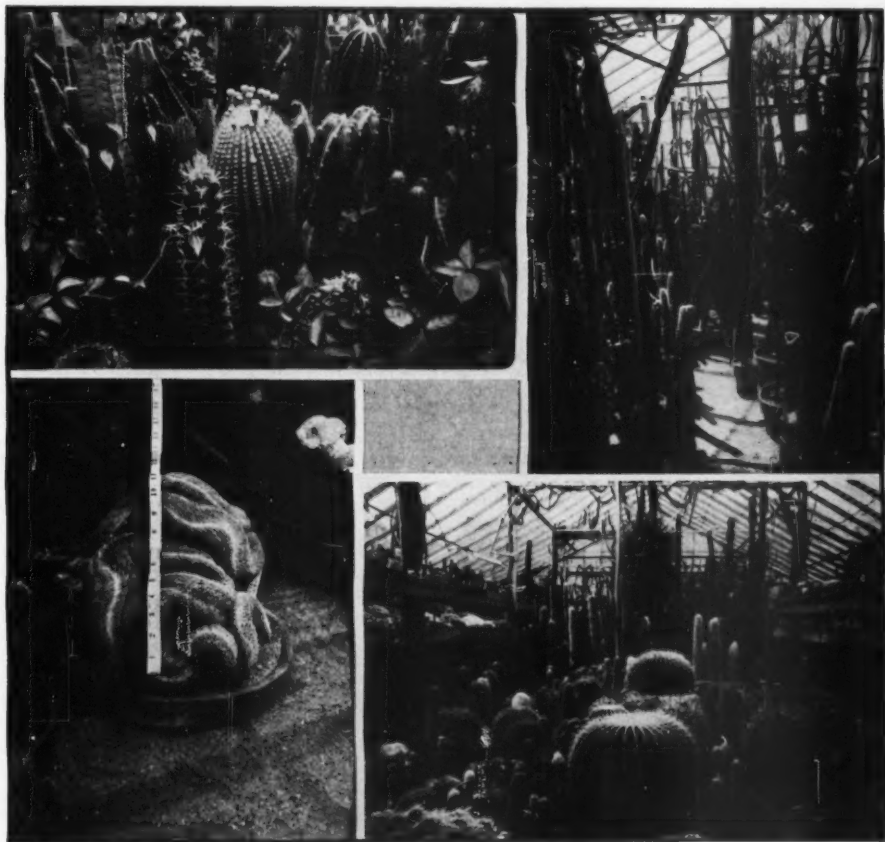
Speaking of commercial men—H. O. reports that the general opinion is that the Society is run by and for commercial men. The former may be correct, but at any time that sufficient amateurs present themselves with the required energy and ambition to direct the Society we know that every commercial man would gladly take an inactive position where he might be relieved of this added responsibility. The advantage of having our commercial men directing the Society is that their interest is usually greater and lasts longer than many amateurs. In the past, most of the hard work has been done by those having sales interests combined with their own weakness for collecting. In fact, there are no millionaire dealers because at heart they are collectors.

The ideal organization is one in which the majority of the directors are amateurs and in this way our commercial interests avoid unjust criticism. Our columns are open to suggestions for a bigger and better organization.

Howard, as everyone calls him, also finds that the majority of our members are more interested in pictures than scientific copy. The only way that more pictures are possible will be to double our membership. If the *Journal* is to continue another 10 years something must be done because progress must be made after 10 years of experimenting.

Starting 9 years ago Mr. Bullard purchased two *Echinocacti* for \$1.00 and started collecting everything with a spine, but the *Opuntias* and *Agaves* had to be eliminated to make room for less prolific plants. During these nine years Howard has helped many beginners and institutions with their collections. His enthusiasm and publicity of these strange plants combined with his outstanding collection has been a boon to cactus interest. He often repeats that well known quotation, "Show me a man who loves flowers and I'll love him."

He says that the first cultural point to remember is to forget that there is such a thing as sand except for reestablishing many plants when old roots have been entirely cut back. This practice applies particularly to *Melocactus*. Use leafmold, loam, and broken plaster for its lime. During the growing season he feeds diluted



Views in Howard O. Bullard's glasshouse in N. J. UPPER LEFT: Note flowering branch of *Carnegiea gigantea*. UPPER RIGHT: The jungle section. LOWER LEFT: A 12 inch crest of *Mammillaria aurantiacola*. LOWER RIGHT: Well established specimens which flower and fruit regularly.

fertilizer. H. O. says when plants are well drained and established you cannot give them too much water in their growing season.

In repotting he does not dig a hole in a pot of soil, but prefers to hold the rooted plant in position in the pot and sprinkle the soil around it. The plant is then watered from the bottom.

His main complaint is that dealers ship many plants with grubs in the roots—who should stand the loss, dealer or purchaser? Can borers be treated in the ground or must one dig up the plant and drive the borer out by pouring mercury in the hole? We cannot blame him for requesting dealers not to pack plants in excelsior or other material that is so difficult to remove between the spines. His pet pest controls are: "Tat" for ants, "Red Arrow" for mealy bugs and "Whale-oil Soap" for scale.

The collection contains 3000-4000 plants and would make a cactus show in itself. Abundance of flowers reward this grower who has learned through hard experience how to care for these plants. At times 40 or

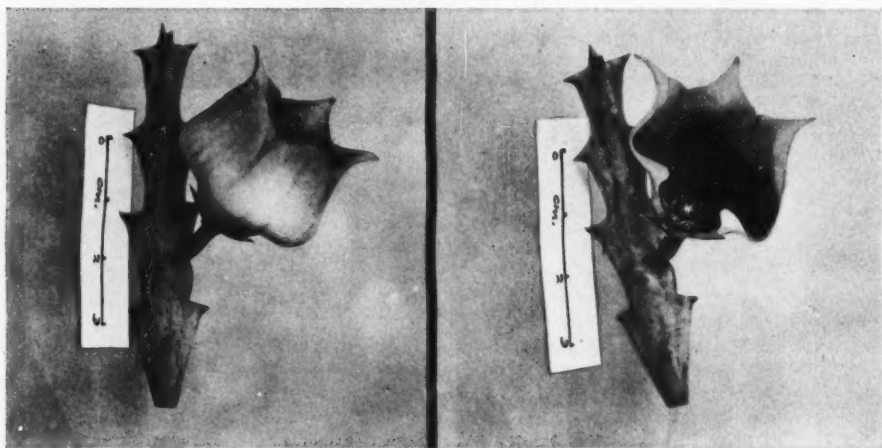
more of his 300 *Mammillarias* have been in flower at one time.

Among the many fine specimens\* are a 13 ft. *Pachycereus marginatus*, a four-foot rooted, flowering *Carnegiea gigantea* (this plant having bloomed the last three years), a 11-in. crest of *Coryphantha recurvata*, a 9-in. *Ariocarpus trigonus*, a 2-ft. clump of *Mammillaria pseudo-crucigera* with 60 heads, 2-ft. cluster of *Mammillaria morganiana*, 2-ft. cluster of *Mammillaria alba minor* and about 50 other large clusters, an *Echinocactus grusonii* weighing hundreds of pounds, most of the rare South American plants, 7 species of *Melocactus*, beautiful specimens of *Pachycereus gaumerii*; a 13-ft. *Euphorbia ingens*, and hundreds of other specimens seldom seen in other collections.

Society members travelling within miles of Hackensack have visited friendly H. O. and his collection. Within a year the following took advantage of his hospitality: William Hertrich, William T. Marshall, Alain White, Mrs. Gertrude D. Webster, Harry Grimes and Ye Editor.

\*See illustration, Vol. VII, No. 1, Pg. 14.





*Stultitia conjuncta* White and Sloane. Photo by R. A. Dyer.

## STULTITIA CONJUNCTA White and Sloane

By R. A. DYER

This interesting species was described for the first time in the November, 1938, issue of the *Cactus and Succulent Journal*. The type plant was forwarded from South Africa to America by Mr. H. Herre without particulars as to its origin. It so happens that identical plants have been under investigation at the National Herbarium, Pretoria, for the past year. One flower was obtained in January, 1938. It is unnecessary to give here a description of the plants in Pretoria since a comparison of the photographs reproduced here with those accompanying the type description cited above, will be sufficient proof that they represent the same species. The object of this note is to localize the species and give a short account of its discovery by Mr. A. H. Crundall.

During 1937 Mr. Crundall, a bank official interested in the collection of succulents, made an excursion in the Zoutpansberg district of the Northern Transvaal. In the arid country a few miles west of Mara Siding he collected a few tufts of what we now know as *Stultitia conjuncta*, then not in flower. On his return to Pretoria he gave the material to Mr. Vogts, an ardent succulent enthusiast who, little suspecting its unique character, distributed cuttings to several of his friends; one piece at least eventually finding its way to the Cape. Mr. J. E. Repton was apparently the one and only cultivator to obtain a flower in Pretoria in 1938 and it was this which was photographed. The flower was so

unusual that the possibility of its being a freak was seriously considered. All the notable features recorded by Messrs. White and Sloane occupied the attention of the writer, who also arrived at the conclusion that, if it was to be placed in any of the known genera, *Stultitia* was the only one which could accommodate it. In view of the difficulty so far experienced of making plants flower in Pretoria, comparatively near to the native habitat, all the more credit is due to Mr. Sloane for his success in this respect. It is gratifying to be able to supply the only information lacking in the original account before interest in the novelty has waned.

Mr. Vogts and Mr. Crundall recently visited the same area of the Zoutpansberg district and although several small colonies of *Stultitia conjuncta* were found on rocky outcrops under the protection of scrub bushes the species could not be said to be common.

December 30, 1938.

### NEW SPECIES OF ECHINOCEREUS

*Echinocereus rectispinus* appeared in the American Journal of Botany, Vol. 25, No. 9, 675-677, Nov., 1938. This new species was named by Mr. Robert H. Peebles of Arizona. This plant is published in Vol. III, *The Cactaceae*, pg. 37, fig. 45 as *E. fendleri*. Mr. Peebles also sets up *Echinocereus rectispinus* var. *robustus* and uses Britton and Rose *E. fendleri*, Vol. III, p. 36, Fig. 44, as a characteristic specimen. A Key to purple-flowered Arizona species is also included with the descriptions, photographs and spine comparisons.



## Cactus Growing in Holland

By J. A. JANSE, F.R.H.S.

Secretary of the Dutch Society of Cactus Amateurs

In Holland, where as generally known, horticulture has reached a high degree of development, amateurism for succulent plants is widely distributed. Not only that one may see cacti and succulents in the windows and on balconies in summertime, but there are also a great many of real lovers who have large collections of them and have built a special greenhouse for these interesting plants. If one takes into consideration how limited finances often are disposable, the more one would be astonished of the results obtained and which are the reward of careful cultivation.

The Dutch climate is not very fitted for the cultivation of succulent plants. Our winters are not very cold, however, they are foggy and have frequent spells of bad weather. Our summer, being rather short, is preceded by a long and often cold spring and so it may hold out to the end of May that our plants show any growth. Before that time one cannot put the plants out of doors, whereas they must be brought in the greenhouse again by the beginning of October. Many extreme succulents do not get then the amount of heat needed whilst it proves difficult to protect the plants against the excess of moisture. Notwithstanding that we water moderately, the air remains moist and extreme succulents show unnatural growth.

Another difficulty is the limited knowledge we have of the natural habitats of our plants. Much has been written about cacti, there are many books which deal, scientifically and popularly, with the nomenclature and the cultivation of succulents, but only few informations are given about the climatological conditions to which our plants are exposed. The vast area over which our plants are distributed has many different climates, including almost tropical districts, but also the high mountain chains of the South American Alps, where snow covers the summits of the highest peaks. Of course, one can figure one's self the climate of the most important countries where cacti are growing, but much remains unknown to the cultivator who had not the opportunity to visit those countries himself and much has to be done in respect of ecological plantgeography. Not only the temperature differs considerably, also the amount of precipita-

tion varies greatly between the few inches rain at the Peruvian westcoast and the tropical rains of Central America. It must be emphasized that the general knowledge we have of the climates is almost insufficient to understand the needs of real difficult plants.

Moreover, the knowledge of the climate doesn't say us anything about other conditions, whether the plants are growing exposed to the sun or in the shade. *Obergonia denegrii* Fric., becomes red when grown in full sun and fails to flower, but grown in semi-shade it does very well; later I was informed by Mr. Backeberg that it really grows under shrubs in its native country. This example may demonstrate that often the habit of a plant is misleading in regard to its needs. On the other hand some species may be grown without any difficulties; especially those from the temperate zones of South America do extremely well and flower profusely. *Notocactus baselbergii*, *N. ottonis*, *N. submammulosus*, *Gymnocalycium* and *Rebutias* belong quite obviously to the most beloved species. Of the Mexican species *Mammillarias* are among the most popular, the greater part of them being quite free-flowering. *Anhalonium williamsii*, the Mexican peyote, blooms very freely here and even the seeds come to maturity, but *Coryphantha* and *Cochemiea*, gems from Lower California, are seldom seen in cultivation.

It would be very difficult to rate how many species have been introduced in our country, but there are collections containing about 600-800 species of Cactaceae and many hundreds of succulents of other families, which are obviously less "en vogue" in Holland. Many cultivators, however, are specialized in a distinct group of which *Haworthias* and *Euphorbias* should be particularly mentioned. In consequence of export embargo, the importation has decreased considerably and the material imported is of inferior quality also. But there will be demand for rare and interesting species of the popular varieties which are grown in some nurseries in such incredible quantities that importation has no advantage. Practical experience has shown that seedlings grow better than imported plants and are also more resistant against our capricious climate, but several species grow extremely slow-

ly so that the cultivator must have much patience waiting for the first blooms.

Many cacti are sown in Holland and often with excellent results. Dutch cactus growers do not agree on the best way to sow the seeds, whether early in spring with the help of artificial heat or in April and May without heating.

As the conditions for growth vary so greatly, even in related genera, it becomes evident that the same treatment of their seeds will have different results. Most desert plants scatter their seeds during the short rain periods when conditions for rapid germination are present. The South African *Glottiphyllum* has fruits that



UPPER LEFT: Mr. Schutte's collection in Amsterdam. UPPER RIGHT: *Pelecyphora aselliformis* flowering in Mr. Gerritse's collection. Note the label sealed in a glass tube. LOWER LEFT and RIGHT: Groups in Dr. Claeys's collection in Amsterdam.

open under influence of a moist atmosphere. As we know that even young seedlings have all adaptations to diminish the evaporation and only the germinating seeds are wanting these qualities it is easy to understand that the plant tries to attain the seedling stage as quickly as possible and the first method of sowing with its regular heat and moisture is less dangerous to the plant than the latter.

Last summer the Dutch Society of Cactus Amateurs carried out experiments with auxines to determinate its influence on the root formation of cuttings; now we are waiting for the results of these investigations.

Concerning nomenclature and the identification of succulent plants we are in rather unfavorable circumstances. Our climate does not accelerate rapid growth and as many species do not attain their flowering state except with age, we have few opportunities to study the structure of their flowers and fruits, which are of high importance for identification. It is therefore quite obvious that a bulk of new names is never used, but for species with which nearly every collector is familiar the new generic names are introduced in every day's language. With us much more difficulties are present in the identification of certain species, especially in *Ferocactus*, *Stenocactus* and many *Cerei*, as there exist no large collections of type plants containing old specimens in which the specific characters are clearly demonstrated. Since Berger wrote his classical investigations in 1905 much has been altered in cactus nomenclature. Then followed the gigantic work of Britton and Rose resulting in their fundamental work *The Cactaceae* based on years of study and experiment. Nevertheless there is much confusion in several groups, mainly due to the ambiguous definition of certain genera.

The first work to do, to avoid more confusion than already is existing, should be a complete list of all generic names published up to the present, with an indication of their type species and a discussion of their value in connection to laws of priority. Britton and Rose cancelled *Pilocereus* of Lemaire in favor of *Cephalocereus*, but both names are generally used in Europe though they were based on the same type species *Cactus senilis*.

It should be realized that nearly all Schumann's subgeneric names are used as generic names though they were never published according to Art. 42 of the International Rules of Botanical Nomenclature, excluded those accepted by the American authors. Many other names have never been published validly and may always be cause of further confusion. Although many collectors are drowned in a sea of

new names, it still is more serious that so many descriptions are not very clear and the species referred to become subjects of wrong interpretation.

This brief account on cactus growing in Holland may show how deeply interested we are in this branch of horticulture, it may augment the knowledge of these curious plants and help to encourage the relations between cactus-lovers throughout the world.

#### OCCASIONAL PAPERS OF RANCHO SANTA ANA BOTANICAL GARDEN

Series 1, No. 2, was published in Sept., 1938, and contained California Plant Notes II. This report by Carl B. Wolf is based on California flora observed in many localities and grown in Santa Ana Canyon, Orange County, Calif., the site of the Botanical Garden.

The items of special interest to cactus students are: *Opuntia acanthocarpa Ganderi* C. B. Wolf, subsp. nov. which the author states, "It is strange that the distinctive features of this *Opuntia* have escaped collectors' notice, since it extends over such a considerable area. It differs from *O. acanthocarpa* Engelm. & Bigel. of the eastern Colorado and Mojave Deserts in having a much more vigorous growth habit, greener color to the joints, but particularly in the more delicate, but much more numerous spines."

*Opuntia echinocarpe Parkeri* (Engelm.) Coult. has been observed by the author for ten years and he feels that this plant differs from *O. echinocarpe* Engelm. and is a distinct entity.

Other new creations of the author are:

*Opuntia Fosbergii* C. B. Wolf, sp. nov. nom.

*Opuntia Munzii* C. B. Wolf, sp. nov.

#### BLUHENDE KAKTEEN UND ANDERE SUKKULENTE PFLANZEN

The 37th publication of Dr. Werdermann's color photographs included:

*Echinocereus acifer* (Otto) Lemaire var. *durangensis* (Poselger) K. Schumann. *Parodia sanguiniflora* (Fric) Backeberg. *Thelocactus hexaedrophorus* (Lemaire) Br. and R. *Mammillaria aylostera* Werdermann; this is the beautiful yellow flowered Mam. named last year in Kakteenkunde.

Mappe 38 contained unusual pictures of: *Lobivia boliviensis* Br. and R., *Lobivia aurea* (Br. and R.) Backeberg, which is our yellow flowered *Echinopsis aurea*, *Lobivia hastifera* Werdermann nov. spec.; this plant was collected by Harry Blossfeld in the province of Jujuy, Argentina. *Notocactus mueller-melchersii* Fric. from Uruguay.

Bound copies of this excellent series are a priceless addition to cactus libraries. The subscription price is 16 RM per year (\$6.00) issued quarterly by J. Neumann, Neudamm, Germany.

Among the plants just received from Mr. C. W. Armstrong there was a fine, curly, grafted crest of *Solisia pectinata* which sent my small sons into shrieks of laughter because "he's such a funny little guy!" They even take great interest in all the mouth filling names and inquire about each one. When a pair of cactus fans go in for Latin names at five years old, that's something! They even remember some of them.

INA O. DIMOCK, Canada.



UPPER LEFT: Mrs. Moir's garden beside the ocean on Kauai, T.H. Aloes thrive and flower in this humid climate tempered with the trade winds. UPPER RIGHT: A *Lemaireocereus* two stories high surprises Ye Editor in Honolulu. LOWER LEFT: A hedge of *Euphorbia lactea* near Mrs. Moir's estate. LOWER RIGHT: *Mammillarias*, *Stapelias*, *Euphorbia splendens*, *Chamaecereus silvestrii*, *Echeverias* and *Epithelantha micromeris* in one small outdoor grouping against dark volcanic rock in Mrs. Moir's garden.

## FAVORITE PLANTS IN HAWAII

I am jotting down my "Ten Favorites," it is hard to limit oneself when they are all so fascinating. But here goes:

1. *Echeveria gibbiflora* var. *flammea*—because the coloring of the plant and flowers only an artist could have conceived.

2. *Agave victoria-reginae*—because it is the acme of perfection.

3. *Ferocactus longispinus*—because its cellophane-like yellow-red flowers are such a contrast to its brutal aspect.

4. *Stapelia gigantea*—because, despite its piilan (Hawaiian for nasty) odor, it is one of the most striking flowers.

5. *Kitchingia mandrakensis*—because it is so strong and gets so soft looking.

6. *Cephalocereus senilis*—because he is such an old dear!

7. *Hylocereus undatus*—because it is decorative when not in bloom and a never to be forgotten thrill when in flower.

8. *Astrophytum myriostigma*—because it is so



neat and tidy and has such yellow flowers.

9. *Sedum adolphii*—because the golden sedum it surely is, and the flowers are exquisite.

10. *Aloe striata*—because in shape, coloring, flowers, it is gorgeous.

My plants have done very well this year. We have expanded a bit more and I have tried new plants; Haworthias, Astrophytums and Kalanchoes. I find the Kalanchoes most satisfactory as the colors are lovely, the growth decorative and the flower exquisite. I am going in for them "in a big way," as they are lovely in arrangements in the house.

The Aloes are all doing well and the colors of the flowers are a delight.

The Kitchingia has offsets from the rootlets, and I saw a growing leaf on the ground with a plantlet on it, too. No danger of extermination!

MRS. HECTOR MOIR, Kauai, T.H.

EDITOR'S NOTE: After a recent visit to the Moir gardens Professor Skottsberg of the Swedish Royal Academy, an eminent Botanist, stated that the garden was a treat to him as he saw familiar plants in their out-of-door plantings instead of in a hothouse, also that the arrangement was unusual.

Mrs. Moir is sending us the cut from which her Christmas cards were printed. Until one has seen the gal len, it is difficult to believe that a perfect arrangement can be made by combining cacti, lily ponds, aloes, sanseverias, stapelias and colorful "crotons."

#### FROM CANADA

To me this study of cacti and succulents is the most interesting hobby in the world. It has changed my leisure hours from the drab and humdrum to something to look forward to after a day in a dull dry office, (work I loath) to moments so absorbing and pleasurable that I feel as a prisoner would feel getting out of prison.

Most of my friends look on cactus plants as ugly things with vicious sharp spines and scoff at the idea of them blooming, (that is any cacti of my collection) and grudgingly admit that possibly they do in their native environment, but not otherwise. My collection is small and the plants themselves are small as being a very poor man I am regulated to the 25c variety—even my membership fee I borrowed and am paying my friend back 50c a week and I'll always be grateful to him because I needed it quickly because I wanted the November *Journal*.

I have moved to new quarters and for my cactus it is a far more ideal location than my former residence so I guess things do work out for one when their ambitions and interests are utterly sincere.

In the *Journal*, a member recommended "Paradichlorobenzene" to kill insects. I used it with success to get rid of Red Spider that began to infest my plants, placing two or three crystals around the earth at the base of the plant and then putting a large glass bowl over it for a few minutes.

To me cacti are one of marvels of nature, the purpose of their spines and the beauty of their flowers, a hobby of constant and unending interest to a true "Cactophile" and I am very proud to be one.

JAMES MALONE, Canada.

A suggestion that may benefit many of our *Journal* readers: I refer to the use of rubber gloves in transplanting or handling many of the Mammillarias or other small spined genera. Their use is much more preferable than wooden clamps because there is no chance of roughening the outer skin of the plants or of being stuck in return.

An Orchid Cactus to you for such wonderful news in the *Journal* and an Orchid Cactus to a great secretary, Chas. R. Cole (K. I. O. Cactus Club) for his enthusiasm in behalf of all Cactus lovers.

JOSEPH F. SCHNURR, Ohio.

Later on I will try some other kinds of cacti. You see, I am an old man (not so old in years—63) but am in disabilities which I contacted in the Indian and Spanish Wars so that leaves me in a position where money is none too plentiful. When able, physically and financially, I am improving the grounds around my home but am not doing it very fast since I am on top of a regular rock pile and no fooling. I love flowers and trees, things that are bright, alive, green, and with contrast of colors such as only mother nature can produce, providing we do a few things which she expects of us, and the cactus and succulent family fascinates me since there are so many different kinds.

F. H. BOHN, Oregon.

#### DEALERS PLEASE NOTE

As regards the growers and dealers (commercial) I wish to state this: I wish you would impress on them the necessity of answering requests promptly (they are always busy) and of sending specimens that measure up to their advertisement requirements and not what we as amateurs would consign to the rubbish heap. After all, there is nothing more discouraging than to receive a puny, scarred and crippled plant after reading the glowing descriptions in the catalogues. This has cost me considerable money and wasted energy.

Also, would like to know why so many Cerei become atrophied (dried out or dead) at the growing top after being planted, have had many a fine specimen ruined and stunted this way.

A. B., New York.

#### COLLECTION FOR SALE

I have a collection of cactus which I am forced to dispose of owing to illness.

Could you write me of any one who might be interested? Have about 70 varieties.

MRS. E. W. BAUMGARTNER,  
213 W. 7th St., Hays, Kansas.

#### CACTUS SEED (Mixed)

150 seed—prepaid—25c

These seeds are fresh seeds, grown by us on our own plants, many rare. Fresh seed germinate much better than those carried from year to year.

400 mixed *Mammillaria* seed postpaid 25c  
500 *Cereus peruvianus* hybrid, best for grafting stock 25c.

We have over 2000 grafted plants, grafted on large *C. peruvianus* stock from 6 inches high up to 3 feet.

We have no catalog at present

"THE MOON" CACTUS GARDENS  
E. Highway No. 66, Glendora, Calif., U.S.A.



## HUMMEL'S EXOTIC GARDENS

"The Cactus Emporium"

4848 Imperial Highway Inglewood, California

<i>Crassula rupestris</i> .....	.15
<i>Echeveria multicaule</i> .....	.15
<i>Sedum multiceps</i> .....	.15
<i>Anacampseros rufescens</i> .....	.15
<i>Trichocereus spachianus</i> , 5 inch. ....	.15
<i>Gasteria verrucosa</i> .....	.20
<i>Euphorbia splendens</i> , 6 to 8 inch. ....	.25
<i>Aloe variegata</i> , beautiful 4 inch plants. ....	.35
<i>Kitchingia mandrakensis</i> , 5 inch. ....	.50
One beautiful <i>Euphorbia lactea</i> crest, 24 inches high, 20 inches across each way. ....	\$100.00
One <i>Echinocactus grusonii</i> , 21 in. diameter. ....	35.00
One <i>Echinocactus grusonii</i> , 19 in. diameter. ....	25.00
One <i>Echinocactus grusonii</i> , 17 in. diameter. ....	20.00
<i>Espositoa lanata</i> all sizes up to 10 inch.	
Perfect unblemished specimens. All prices F. O. B.	

Visitors welcome. In answering mention the *Journal*

## TEXAS SPECIALS POSTPAID

<i>Astrophytum asterias</i> .....	\$1.00
<i>Lophophora williamsii</i> .....	.50
<i>Acanthocereus pentagonus</i> .....	.50
<i>Echinocereus papillosus</i> (cluster) ....	.50
<i>Opuntia leptocaulis</i> .....	.25
<i>Opuntia imbricata</i> .....	.25

No seedlings . . . all six for \$2.50

Dealers write

## FITZPATRICK'S CACTUS GARDEN

A Live-Forever Is a Joy Forever

700 S. Closner Blvd. Edinburg, Texas

Please ask for our new price-list of Cacti and Succulents which will be sent to you free of charge.

## SCHWARZ &amp; GEORGI

Apartado No. 7  
San Luis Potosi, S. L. P. Mexico

## ALOE VERA

for sale by

MRS. C. B. PORTER

Box 223, Alamo, Texas

## BEGINNER'S COLLECTION

12 three-inch to 4-inch Cacti, blooming age, named varieties, no two alike, with 12 Mexican pottery to pot same, \$2.50 post paid.

12 two-inch Cacti, named varieties, no two alike, with 12 Mexican pottery for potting same, \$2.00 post paid.

15 three-inch to four-inch Cacti, blooming age, named varieties, no two alike, \$2.00 post paid.

15 two-inch bowl size Cacti, named varieties, no two alike, \$1.00 post paid.

50 miniature Cacti, assorted varieties for dish gardening, \$1.00 post paid.

## A. R. DAVIS

P. O. Box 167, Marathon, Texas



## CACTUS SEED

Amateurs Surprise Packet—100 mixed seeds easily grown species, 25c with free illustrated catalogue and culture directions.

Special—over 1,000 fine imported and blooming size specimen plants. Ask for list.

## R. W. KELLY

2410 LA ROSA DRIVE  
Tempe City, Calif.

SPECIAL FOR CACTUS LOVERS—Beautifully colored *Echinocereus rigidissimus* the Rainbow Cactus—4-inch sizes 25c each, large 10-inch specimen \$1.00 each, some 6 to 8 inch specimens at 75c each. These are truly beautiful cacti and should be crowned, "Queen of the Desert."

Miniature cacti for small gardens 50 for \$1. 15 blooming size assorted, named varieties, some clusters and display specimens \$1.00. Mexican bowls all sizes up to 6 inches, different shapes \$2.00 dozen.

All packed F.O.B. Charges Collect

## EL PASO CACTUS CO.

Station A., Box 3038, El Paso, Texas

## CUTTINGS OF HARRISIA BROOKII

Am offering 50 cuttings averaging 12 inches long and 3/4 to 2 in. in diam. 25c each or 4 for \$1.00 postpaid. Make offer for the lot.

## H. M. WEGENER

1190 Leighton Ave., Los Angeles, Calif.

Write for free specimen of "WATER LIFE" the well-illustrated, interesting and instructive British Aquatic weekly (3d.), Dept. C. S. J., 7 Milford Lane, London W. C. 2.

## WATER HYACINTHS

24 water hyacinth bulbs \$1.00 postpaid. 12 water lily bulbs \$1.50 postpaid. Both selections \$2.00 postpaid. Why not have an indoor water dish garden or outdoor pool. Dealers write.

## J. LESTER MORRISON

522 E. Mobile St., Florence, Ala.

## MEXICAN CACTI AND OTHER SUCCULENTS

100 different, mature plants. ....	\$20
50 different, mature plants. ....	\$10

Postage paid by purchaser

I call your special attention to my great assortment of Specimen-Show-plants and Crests.

## F. SCHMOLL

Cadereyta, Qro., Mexico

Owner of the Export Permit of the Mexican Government

